PRYADKO, E.I.; TETERIN, V.I.; SHOL', V.A.

Helminth infestation of marals according to their age and the season of the year. Izv. AN Kazakh. SSR. Ser. biol. nauk 3 no.4: 57-64 Jl-Ag '65. (MIRA 18:11)

TETERIN, P.K., kand.tekhn.nauk

Grooving piercing-mill mandrels. Obr.met.davl. no.3:254-267 '54. (MIRA 12:10)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Rolling mills)

TETERIN, P.K.; LUZIN, Yu.F.

Developing a technology for the rolling of pipe made of low nickel-alloy stainless steels. Sbor. trud. TSNIICHM no.39:191-199 '65.
(MIRA 18:7)

TETERIN, P.K.; LUK'YANOV, V.P.

Production of section and sheet metal from the EP375 alloy. Sbor. trud. TSNIICHM no.39:200-205 '65. (MIRA 18:7)

L 17415-66 EWT(m)/EWA(d)/EWP(t) JD/HW

ACCESSION NR: AP5013676 SOURCE CODE: UR/0182/65/000/005/0001/0005

AUTHOR: Polukhin, P.I.; Teterin, P.K.; Luk'yanov, V.P.; Vorontsov, V.K.; Kartoshkin, A.A.

ORG: none

TITLE: Stress deformation state in rolling circular blanks

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 5, 1965, 1-5

TOPIC TAGS: stress analysis, strain, material deformation, circular forging, circular blank, blank, reduction, tensile stress, applied load, load, mandrel diameter effect, ram form effect, reduction degree effect

ABSTRACT: This study was carried out because there is an increasing need of circular forgings from difficultly deforming stainless, and heat resistant, steels and alloys. The stress deformation state of the metal in the area of deformation during the rolling of the circular blanks on a mandrel was investigated with respect to the form of the working surface of the ram (plane, concave, and convex), diameter of the mendrel, and degree of reduction. The experimental results show

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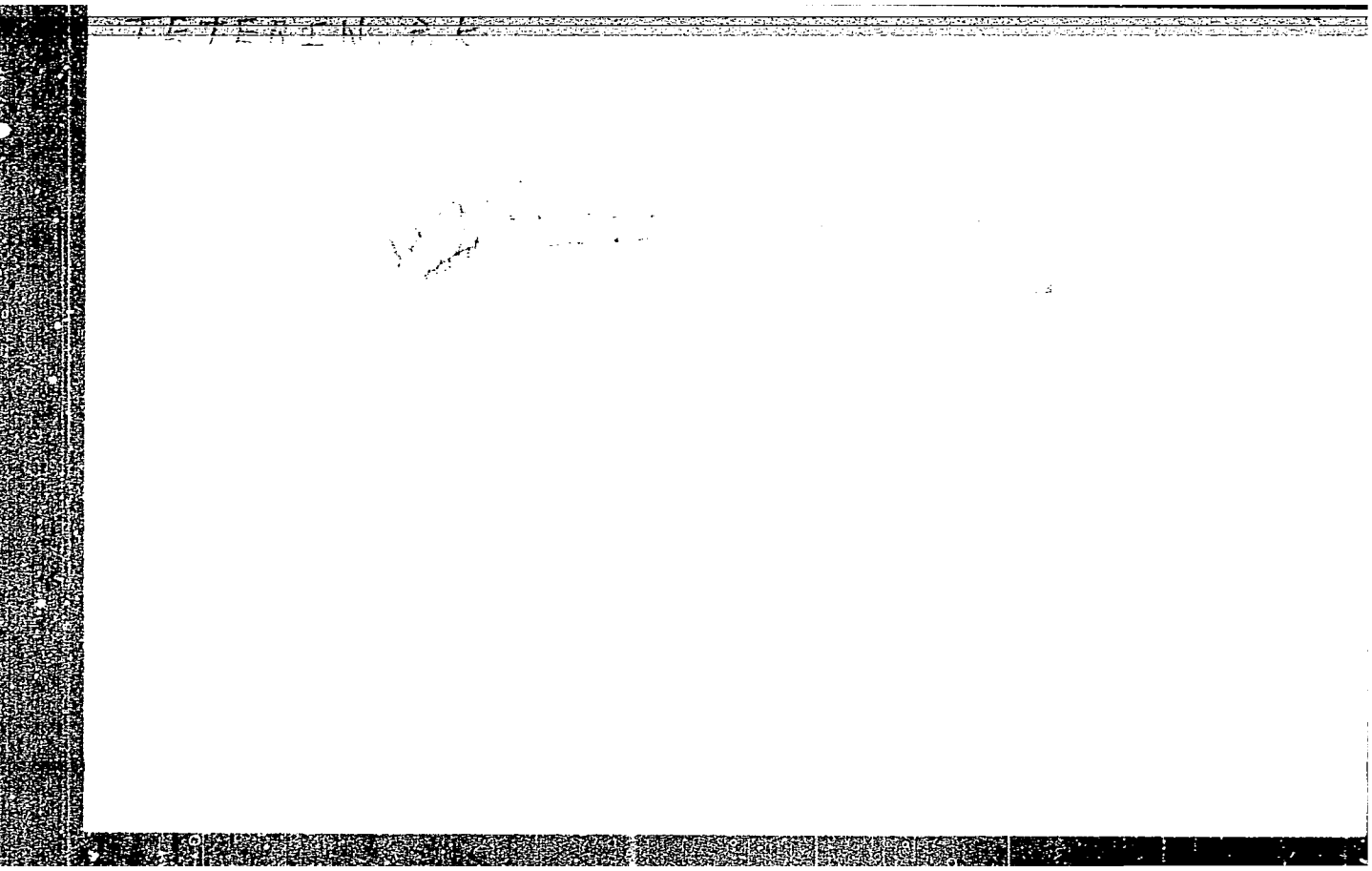
L 17415-66
ACCESSION NR: AP5013676

that 1) the process of reduction of circular blanks on a mandrel is accompanied by the occurrence of tensile stress in the deformation area perpendicular to the applied load, 2) the tensile stress and the zone it affects in the deformation area markedly decrease with increase in the degree of reduction, and 3) an increase in the mandrel diameter and application of a concave ram tends to decrease the area of action of the tensile stress as well as of its absolute value. Orig. art. has: 4 formulas, 5 figures, and 3 tables.

SUB CODE: 13,11 SUBM DATE: 00 ORIG REF: 004 OTH REF: 000

Card 2/2 nst



APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001755510012-4"

TETERIN, P.K., kandidat tekhnicheskikh nauk; DANILOV, F.A., inzhener; TRIFONOV, Ye.S., inzhener.

Variations in pipe walls rolled on a three-high mill. Stal' 16 no.8: 721-727 Ag '56. (MLRA 9:10)

1.TSentral'nyy Nauchno-issledovatel'skiy institut chernoy metallurgii i Pervoural'skiy Novotrubnyy zavod.
(Rolling (Metalwork)) (Pipe, Steel)

TETERIN, P.K.

TETERIN, P.K.

Effect of forces in diagonal rolling and draft conditions in three-high mills. Trudy Inst. met. no.2:95-108 '57. (MIRA 10:11)
(Rolling (Metalwork))

AUTHOR: TETERIN,P.K., Cand. of Tech.Science PA - 2399
DANILOV,F.A., and MANEGIN,YU.V., Central Scientific Research Institute for Iron Production (Tsentralnyy nauchno-issledovatel'skiy institut cherno metallurgii - TsNIICHM) and "Novotrubnyy"-plant (Novotrubnyy zavod).

TITLE: Investigation of Diagonal Rolling on the Three-Rolls Tube Mill (Issledovaniye protsessa kosoy prokatki v trekhvalkovom stane, Russian).

PERIODICAL: Stal', 1957, Vol 17, Nr 2, pp 147 - 151 (U.S.S.R.).
Received: 5 / 1957 Reviewed: 5 / 1957

ABSTRACT: The character of the metal flow, the rotation of the tubes during rolling, and the influence of this rotation on the quality of the tubes, the sliding of ingots in the rolls, the metal pressure brought to bear on the rolls , the comsumption of energy and the load of a motor a three-high universal mill train were investigated. Investigations were carried out not only at normal working consitions but also with a change of the feeding angle, the rotational speed, and the height of the cogged cylinders. It was shown that 1) the rotational angle changes according to working conditions from 12,2° - 33,6°, 2) that practically it does not depend on the rotational speed, 3) that it depends essentially on the feeding angle (with the widening of which the rotational angle is reduced), 4) that it depends on the height

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Investigations of Diagonal Rolling on the Three-Rolls Tube Mill. PA - 2399

of the cogged cylinders: it grows with the increase of height. During rolling on the three-rolls tube mill films develop on the outer surface of the tubes the reason for which can be found in the damaged jackets. These defects become more important with increasing rotation. The sliding coefficient of the axis' direction varies from 0,64 - 1,18 and is practically independent of the rotational speed. The sliding coefficient in the radial direction is smaller than one. Both coefficients become smaller if the feeding angle becomes greater and both of them become greater if the height of the cogged cylinders increases. The pressure on the rolls during rolling of the types of tubes investigated amounts to 8,7 - 34,4 t and increases with an increasing height of the cogged cylinders and of the feeding angle and if the material to be rolled has a greater strength. The energy consumption becomes smaller if the feeding angle increases, on wh which occasion motor stress increases. Motor stress changes proportionally to the rotational speed of the rolls. (9 ill. and 3 t tables)

Card 2/2

ASSOCIATION: Central Scientific Research Insitute for Iron Production and "Novotrubnyy" Mills.

PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress.

TETERIN, P.K., kand.tekhn.nauk; KLYAMKIN, N.L., kand.tekhn.nauk; MUSORINA, I.Ye., inzh.; KOREPANOV, S.P., inzh.; SOMINSKIY, Z.A., inzh. EL'BERT, S.M., inzh.

Production of two-layer welded pipe [with summary in English]. Stal' 18 no.8:722-726 Ag '58. (MIRA 11:8)

1.TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii i Sinarskiy trubnyy zavod.
(Pipe, Steel--Welding) (Metal cladding)

TETERIN, P.K.

137-58-2-2990

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 109 (USSR)

AUTHOR: Teterin, P.K.

TITLE: The Play of Forces in Oblique Rolling and the Conditions of Billet Engagement in Three-high Mills (Deystviye sil pri kosoy prokatke i usloviya zakhvata v trekhvalkovykh stanakh)

PERIODICAL: Tr. In-ta metallurgii AN SSSR, 1957, Nr 2, pp 95-108

ABSTRACT: Starting with the notion of the force-of-friction direction (the force of friction is expressed by a vector corresponding to the difference between the peripheral speed of the roll and the speed of travel of the billet surface), this paper concerns itself with questions relating to the balance of forces and the conditions of billet engagement in three-high mills used for oblique rolling. Included are equations for the balance of forces and methods for determining the longitudinal-slip coefficient - both valid with and without the presence of a forward-flow zone. Tests have revealed that the initial conditions of longitudinal engatement of a billet in a three-high oblique-rolling mill, as in the case of ordinary rolling mills, are completely stable.

Card 1/1

Yu.F.

1. Rolling mills--Performance--Mathematical analysis

SOV/133-58-8-13/30

AUTHORS: Teterin, P.K., Klyamkin, M.L., Candidates of Technical Sciences, and Musorina, I.Ye., Korepanov, S.P., Sominskiy, Z.A., and El'bert, S.M., Engineers

TITLE: The Production of Two-layer Soldered Tubes (Proizvodstvo dvusloynykh payanykh trub)

PERIODICAL: Stal', 1958, Nr 8, pp 722 - 726 (USSR)

ABSTRACT: The process of production of two-layer soldered tubes was developed by TsNIIChM and tested on the Sinarskiy Pipe Plant. The tubes are made from a cold-rolled steel strip coated on both sides with a thin layer of copper. The edges of the strip are bevelled and the strip is formed into a two-layer tube semis with a close contact of the layers and overlapping of edges (Figure 1). The tube semis are passed through an electric furnace, heated to a temperature somewhat higher than the melting temperature of copper. The heating and cooling is done in a protective atmosphere. During the heating, soldering of the layers along the whole contact surface takes place. Thus, the manufacturing process consists of four main operations: copper coating of strip, bevel cutting of edges, forming of strip into tube semis and soldering. This kind of tube is being produced within a range of diameters from 6 to 16 mm with

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the wall thicknesses from 0.6 to 0.9 mm. Low-carbon, mild steel (08) cold-rolled strip, 0.3 - 0.45 mm in thickness supplied in an annealed state in coils of a width corresponding to the required diameter of the tubes is used as a starting material. The strip is electrolytically coated with copper to a thickness of 4μ; 1 μ of copper is deposited from the cyanide electrolyte and 3 μ from an acid electrolyte. The coating process is continuous (Figure 2, table). The speed of strip through the electrolytic baths varies from 2.85 to 9.65 m/min, depending on its width. Cutting of edges is done in one pass without liquid cooling of knives. The rate of cutting up to 65 m/min (Figures 3 and 4). Forming of strip according to scheme shown in Figure 5 is done on a continuous 14-stand mill (Figure 6) produced by TsKBMM TsNIITMASh at a rate of 30-45 m/min. Formed semis are cut into a measured length (14 100 mm). Lots of 30 semis are passed for soldering in an electric resistance furnace (Figure 7) consisting of two chambers: heating and cooling. The temperature of the heating chamber is maintained at 1130 - 1140 °C. The rate of

passage through the furnace varies from 0.78 to 2.0 m/min, depending on the tube diameter. Protective atmosphere is obtained from charcoal gas producer (CO 31-37%, H_2 ≥ 11%, CH_4 0.2-0.7%, CO_2 1-4%, humidity 7-10 g/m^3). In order to retain a uniform distribution of copper on the surface of tubes during soldering, the latter are coated with a thin layer of a special coating material (not specified) before soldering. It is stated that the mechanical properties of tubes are similar to those of seamless tubes from mild steel (tensile strength 38-42 kg/mm^2, relative elongation 24-30% and pass the hydraulic test according to GOST 301-50). It is pointed out that the process of production of the above tubes is already introduced into practice. It presents significant, technical and economic advantages in comparison with the drawing process. Such tubes can replace

successfully steel seamless tubes as well as copper and brass tubes, thus providing a large saving of non-ferrous metals.
There are 7 figures and 1 table.

ASSOCIATION: TsNIIChM and Sinarskiy trubnyy zavod (Sinarskiy Pipe Plant).

Card 4/4 1. Pipes--Production 2. Steel--Coatings 3. Furnaces--Applications

SOV/137-58-10-20924

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 79 (USSR)

AUTHOR: Teterin, P.K.

TITLE: Analysis of the Forces of Friction and the Conditions of Bite in Disc Mills (Analiz sil treniya i usloviya zakhvata v diskovykh stanakh kosoy prokatki)

PERIODICAL: V sb.: Prokatn. i trubn. proiz-vo. Moscow, Metallurgizdat, 1958, pp 207-226

ABSTRACT: An analysis is presented of the forces of friction acting at any point in the contact surface between billet (B) and roll, and the conditions are found for axial bite (AB) of B with disc mills. It is shown that the conditions of AB in disc mills are less favorable than in roll mills. The greater the distance to the gorge from the cross section at which the B enters, the greater the difference in the rate of rotation of the discs and the more intensive the tangential slippage of the B relative to the disc surfaces. This leads to an even greater deviation of the force of friction from the axis of rolling and, consequently, impairs the conditions of AB. The distance from the entry cross section of the B to the gorge increases with the B diameter and the reason for

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SOV/137-58-10-20924

Analysis of the Forces of Friction and the Conditions of Bite in Disc Mills

impairment of AB conditions with increase in B diameter thus becomes clear.

B.Ts.

1. Metals--Processing 2. Metals--Friction 3. Rolling mills--Performance 4. Friction --Analysis

Card 2/2

SOV/137-58-10-20925

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 79 (USSR)

AUTHOR: Teterin, P.K.

TITLE: Analysis of Present Methods of Grooving the Rolls of Hot and Cold Pilger Mills (Analiz sushchestvuyushchikh metodov kalibrovki valkov stanov goryachey i kholodnoy piligrimovoy prokatki)

PERIODICAL: V sb.: Prokatn. i trubn. proiz-vo. Moscow, Metallurgizdat, 1958, pp 227-242

ABSTRACT: An analysis is presented of certain extant methods and equations for the grooving of the collar contour of the breakdown portion of Pilger rolls for hot and cold mills. The shortcomings of the equations currently used are presented.

B.Ts.

1. Rolling mills--Equipment 2. Rolling mills--Design 3. Mathematics

Card 1/1

SOV/137-58-10-20923

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 79 (USSR)

AUTHOR: Teterin, P.K.

TITLE: The Geometry of Helical Rolling (Geometriya kosoy prokatki)

PERIODICAL: V sb.: Prokatn. i. trubn. proiz-vo. Moscow, Metallurgizdat, 1958, pp 243-258

ABSTRACT: The problems of the geometry of helical rolling here examined are resolved primarily for mills with tapered rolls (R).

B.Ts.

1. Metals--Processing 2. Rolling mills--Applications 3. Mathematics

Card 1/1

TETERIN, P.K., Doc Tech Sci--(diss) "Problems of the theory of ~~oblique~~ inclined rolling." Mos, 1958. 24 pp (Acad Sci USSR. Inst of Metallurgy im A.A. Baykov), 150 copies. Bibliography: pp 23-24 (10 titles) (KL,30-58,126)

SOV/133-58-10-18/31

AUTHOR: Teterin, P.K., Candidate of Technical Sciences

TITLE: On the Problem of Kinematics of Processes of Transverse and Diagonal Rolling (K voprosu o kinematike protsessov poperechnoy i kosoy prokatki)

PERIODICAL: Stal', 1958, Nr 10, pp 923 - 925 (USSR)

ABSTRACT: Contradictions between the theory and experimental data on the mechanism of slipping of a rolled body in the longitudinal direction during transverse and diagonal rolling are discussed.
There are 4 figures and 5 Soviet references.

ASSOCIATION: TsNIIChM

Card 1/1

TETERIN, P. K.

18(0) PHASE I BOOK EXPLOITATION SOV/2316

Akademiya nauk SSSR. Institut nauchnoy i tekhnicheskoy informatsii

Metallurgiya SSSR, 1917-1957; [t.] II (Metallurgy in the USSR, 1917 - 1957; Vol 2) Moscow, Metallurgizdat, 1959. 813 p. Errata slip inserted. 3,000 copies printed.

Ed. (Title page): I. P. Bardin, Academician; Ed. (Inside book): G. V. Popova; Tech. Ed.: P. G. Islent'yeva.

PURPOSE: This book is intended for metallurgists.

COVERAGE: The articles in this collection present historical data on the achievements of Soviet metallurgy, both ferrous and nonferrous, during the period 1917-1957. Advances in theory and practical application are thoroughly discussed. Many of the articles describe the present status of individual branches of metallurgy and give an idea of what may be expected in the future. Advances made in other countries are also discussed. The articles are accompanied by a large number of references. For further coverage, see Table of Contents.

Card 1/15

Metallurgy in the USSR (Cont.)

TABLE OF CONTENTS:

SOV/2316

Metallurgy in the USSR (Cont.)

Pavlov, I. M., Corresponding Member, USSR Academy of Sciences, Professor, Doctor of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Scientific Study of the Rolling Process 56

This article is an extensive survey of scientific writings on the rolling process published in various countries including the USSR since 1859. The writings deal with historical development, friction between rolls and metal, force and power relations, deformation, high-speed rolling, and special methods of rolling.

Bardin, I. P., Academician; and L. L. Pinkhusovich, Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) The Rail Problem 82

Historical information on the development of engineering standards for the acceptance of rails and on the amount of rails manufactured by openhearth, Bessemer, and Thomas processes is presented. Changes in weight and types of rails, improvements in quality and technique (e.g., quenching from rolling temperature and after reheating, use of alloy steel, etc.) are pointed out. Measures taken for further improvement and elimination of defects are mentioned.

Card 3/15

Metallurgy in the USSR (Cont.)

Pinkhusovich, Candidate of Technical Sciences; and A. G. Nikonov, Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Achievements in Railroad Wheel and Tire Production 101

Changes in engineering specifications and improvements in production techniques and quality of tires and solid wheels in the USSR since 1940 are discussed. Further progress in this field is predicted.

Zimin, A. I., Professor, Doctor of Technical Sciences. (MVTU) Forging and Stamping Methods 113

This is a historical survey of developments in forging and stamping processes in Russia from prerevolutionary times up to 1957.

Levi, L. I. Candidate of Technical Sciences. (Moscow Institute of Machine Design) Production of Castings 141

The paper traces the general course of development and discusses problems in the theory of casting, casting alloys, basic melting processes, molding and core materials, nonmetallic molds, special casting methods (permanent mold casting, die casting, continuous

Metallurgy in the USSR (Cont.)

casting, centrifugal casting, investment casting, etc.), equipment, mechanization, and automation.

Bal'shin, M. Yu., Candidate of Technical Sciences; and G. V. Samsonov, Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences; and Institute of Powder Metallurgy, Ukrainian Academy of Sciences) Powder Metallurgy 175

The article is a general survey of the development and present state of powder metallurgy in the USSR. Theoretical and practical aspects of the preparation of cemented and sintered metal products are discussed.

Rykalin, N. N., Corresponding Member, USSR Academy of Sciences; N. O. Okerblom, Professor, Doctor of Technical Sciences; A. A. Yerokhin, Candidate of Technical Sciences; and M. Kh. Shorshorov, Candidate of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences; and Leningrad Polytechnic Institute) Progress in the Science of Welding Metals in the USSR 19

The authors discuss the studies that have been made in the USSR of the theoretical aspects of welding, beginning in the latter part of the nineteenth century. Specific topics are: investigation of the arc,

Card 5/15

Metallurgy in the USSR (Cont.)

theory of welding deformations and stresses, calculation methods used in planning the industrial production of welded structures, and the theory of strength of welded structures.

Kidin, I. N., Professor, Doctor of Technical Sciences. (Moscow Institute of Steel) Use of High Frequency Currents in Physical Metallurgy 216

The author discusses the following: types of phase transformations occurring during rapid heating; the magnetic theory of the kinetics of induction heating; interconnection between original structure, steel composition, and the kinetics of heating; structure of austenite formed during induction heating; transformation of austenite into martensite and tempering after high-frequency hardening; ways of improving the technology of induction heat treatment; regimes of induction hardening; and application of induction heating in carburizing.

Gulyayev, A. P., Professor, Doctor of Technical Sciences. (Moscow Evening Institute of Machine Design) Heat Treatment and Thermochemical Treatment of Steel 23

After giving a classification of the types of heat-treating processes, the

author discusses the thermodynamics, mechanism, and kinetics of phase changes, as well as the formation, decomposition, and transformation of austenite. The concluding section deals with diffusion processes.

Metallurgy in the USSR (Cont.)

Various methods (metallographic, chemical, vacuum melting, etc.) for determining and removing nonmetallic inclusions and occluded gases are described. Results of investigations are discussed.

Svet, D. Ya., Doctor of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Direct-reading Radiation Pyrometry of Liquid Metals in the USSR 342

The author outlines the development of pyrometric methods in the USSR and then discusses specific questions of direct-reading radiation pyrometry (electronic systems used, investigation of emissive capacity of metal baths, direct-reading methods of controlling the temperature of metallurgical processes, calibration of systems for color pyrometry, and measurement of actual temperatures in metallurgy by radiation pyrometry).

Mirkin, I. L., Professor, Doctor of Technical Sciences. (TsNIITMASh) Development of Physical Metallurgy in the Soviet Union 379

The paper reviews the development of physical metallurgy in Russia and other countries during the nineteenth and twentieth centuries, tracing successive advances made in various branches of the science.

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Metallurgy in the USSR (Cont.) SOV/2316

Arkharov, V. I., Professor, Doctor of Technical Sciences; and Vonsovskiy, S. V., Corresponding Member, USSR Academy of Sciences) Present State of the Physics of Metals 406

The authors define the subject matter of metallophysics, discussing the basic concepts of the quantum (electron) theory of metals and their "electronic" properties. In the second of the two major divisions of the article the authors discuss the contributions of Soviet scientists in various branches of this field.

Kornilov, I. I., Doctor of Chemical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) Chemistry of Metals in the USSR 440

An account is given of the development of metallochemistry in Russia before and after the Revolution. Work done in specific fields (study of constitution diagrams, intermetallic compounds, and solid solutions) is discussed. The authors conclude by giving their views of the prospects for growth in the field of metallochemistry in the USSR.

Lozinskiy, M. G., Doctor of Technical Sciences. (Institute of Machine Engineering, USSR Academy of Sciences) New Instruments and Methods for High-temperature Vacuum Metallography 478

Card 9/15

This article gives a description of two devices for the metallographic investigation of heated specimens (above 900° C) developed in recent years at the Institute of Machine Engineering, USSR Academy of Sciences. With the first device, designated IMASh-5M, the specimen can be simultaneously studied with respect to its microstructure and the deformation process while in a heated condition and under vacuum; the second device, IMASh-6, is intended for determining the temperature dependence of the modulus of elasticity and of internal friction in metals. In addition, the article describes an instrument for studying the rate of vaporization in metals.

Oshchepkov, P. K., Doctor of Technical Sciences. (Institute of Metallurgy imeni A. A. Baykov, USSR Academy of Sciences) The Problem of Using Penetrating Radiation in Metallurgy 514

The following topics are discussed: development of betatron gamma-ray flaw detection; use of betatrons for activation analysis; development of remote vision in metals; mass-spectrometric methods of analysis; application of ultrasonic image converters in metallurgy; development of new methods of recording weak radiation currents.

This is a general survey of Soviet works in the field of creep-resistant alloys. The works deal with test methods, development of new high-temperature alloys, and theoretical investigation.

The author describes Soviet achievements in the development of high-temperature alloys from the post-Revolution reconstruction period up to 1957. Future prospects are indicated.

This paper reviews the most important works on corrosion of metals published between 1917 and 1957. All aspects of the subject (questions of theory, passivity, corrosion-resistant alloys, corrosion under specific conditions, protective films, etc.) are included.

Soviet accomplishments in the production of bronzes, brasses, nickel alloys, zinc alloys, bearing alloys, solders, heat-resistant alloys of high electrical conductivity, etc., are reviewed.

AVAILABLE: Library of Congress

TETERIN, P. K.

25(1) PHASE I BOOK EXPLOITATION SOV/1878

Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Institut stali

Prokatnoye i truboprokatnoye proizvodstvo (Rolling and Tube Rolling) Moscow, Metallurgizdat, 1959. 268 p. (Series: Its: Sbornik trudov, vyp. 16) Errata slip inserted. 2,500 copies printed.

Sponsoring Agency: USSR. Gosudarstvennaya planovaya komissiya.

Ed.: D. P. Bakhtinov; Ed. of Publishing House: N. A. Valov; Tech. Ed.: A. I. Karasev.

PURPOSE: This collection of articles may be of interest to scientific workers, process engineers in rolling and tube-rolling plants, and students of metallurgical vtuzes.

COVERAGE: The articles describe work done at the laboratory for metal forming at the Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (Central Scientific Research Institute of Ferrous Metallurgy). Some theoretical and practical problems or hot and cold rolling of simple and intricate shapes and tubes are considered. Many of the articles discuss results of scientific research carried out under actual operating conditions. K.K. Andrutskiy, A.L. Filatova, V.S. Smirnov, P.T. Yemel'yanenko, A.I. Tselikov, N.D. Lomakin, V.Ya. Ostrenko, D.Ye. Rokhman, O.A. Plyatskovskiy, I.A. Fomichev, Yu.K. Fedorov, and V.N. Shashkov are mentioned as having contributed to this field. There are 37 references: 33 Soviet and 4 German.

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TETERIN, P.K., kand.tekhn.nauk

Slipping and action of frictional forces in tangential direction in case of transverse and diagonal rolling. Sbor. trud.TSNIICHM no.16:162-180 '59. (MIRA 12:5)
(Rolling (Metalwork))

TETERIN, P.K., kand.tekhn.nauk

Rotation conditions of billets subjected to diagonal rolling.
Sbor.trud.TSNIICHM no.16:181-194 '59. (MIRA 12:5)
(Rolling (Metalwork))

TETERIN, P.K., kand.tekhn.nauk

Torsion caused by diagonal rolling. Sbor.trud.TSNIICHM no.16: 195-214 '59. (MIRA 12:5)
(Rolling (Metalwork))

TETERIN, P.K.; MANEGIN, Yu.V.; MUSORINA, I.Ye.; TRIFONOV, Ye.A.

Designing rolls for rolling-off and grooving mills used in diagonal rolling. Sbor.trud.TSNIICHM no.16:215-226 '59. (MIRA 12:5)

(Rolling (Metalwork))

TETERIN, P.K.; MANEGIN, Yu.V.; BUROV, A.S.

Pressure of metal on rolls during the rolling on Pilger mills.
Sbor.trud.TSNIICHM no.16:227-240 '59. (MIRA 12:5)
(Rolling (Metalwork))

S/137/61/000/002/010/046
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1961, No. 2, p. 28, # 2D263

AUTHOR: Teterin, P. K.

TITLE: Deficiencies in the Process of Oblique Rolling and Ways to Remove Same

PERIODICAL: Tr. Mezhvuz. nauchno-tekhn. konferentsii na temu: "Sovrem. dostizh. prokatn. proiz-va", vol. 2, Leningrad, 1959, pp. 245-249

TEXT: The least reduction in front of the mandrel, which is necessary to assure secondary conditions of axial grip, may exceed in a number of cases the critical reduction during which metal failure in the center of the blank takes place. This causes the appearance of films on the internal surface of the sleeve. To prevent premature opening of the hollow, the magnitude of reduction in front of the mandrel is usually diminished; this measure, however, increases the axial slip, thus reducing the efficiency of the piercing mill and the service life of rolls, raising the power consumption and degrading the external surface quality

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S/137/61/000/002/010/046
A006/A001

Deficiencies in the Process of Oblique Rolling and Ways to Remove Same

of pipes. The author proposes two methods of eliminating the organic deficiency of the piercing mills: 1) piercing with conpulsory axial support of the blank; 2) piercing on a mill with 3 drive rolls, arranged on the circumference through 120°. Speed and power conditions are given for the case of piercing with a support and a formula is presented to calculate the required supporting force. The author analyzes the advantages of the process of piercing on a three-roll mill.

Yu. M.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

TETERIN, P.K.; KLYAMKIN, N.L.; MUSORINA, I.Ye.

Organizing the production of two-ply welded pipes. Sbor. trud.TSNIICHM no.16:241-250 '59. (MIRA 12:5)
(Pipe, Steel)

PAVLOV, Ig.M.; TETERIN, P.K.; KLYAMKIN, N.L.; MUSORINA, I.Ye.

Designing rolls for shaping two-ply pipes. Sbor.trud. TSNIICHM no.16:251-268 '59. (MIRA 12:5)
(Rolls (Iron mills))

KOLPIKOV, D.I.; TETERIN, P.P.

Method of studying the ability of plants to endure wilting.
Fiziol. rast. 7 no. 5:616-618 '60. (MIRA 13:10)

1. Stavropol'skiy sel'skokhozyaystvennyy institut i
Stavropol'skiy pedagogicheskiy institut.
(Plants, Effect of aridity on) (Botanical research)

S/133/60/000/010/008/013
A054/A029

AUTHORS: Teterin, P.K., Doctor of Technical Sciences; Luzin, Yu.F., Engineer

TITLE: The Mechanism of Metal Destruction During Transverse Rolling

PERIODICAL: Stal', 1960, No. 10, pp. 930 - 932

TEXT: After discussing the various theories on this subject (E. Siebel, Ref. 1; A.F. Lisochkin, Ref. 2; I.A. Fomichev, Ref. 3; and V.S. Smirnov, Ref. 4) the authors describe tests carried out to establish the causes and the character of axial destruction of the metal during transverse rolling. A disk 8 mm thick and 50 mm in diameter was placed between two disks of the same diameter, but 25 mm thick and welded on the edges. The disks were made of 1X18H9T (1Kh18N9T) type steel. Owing to this design the thin disk was not attached to the other disks in the center and it was, therefore, not affected by the axial pressure applied to the specimen, which was rolled in transverse direction on plain rollers (the diameter of the upper roller was 346 mm, that of the lower 277 mm), the rollers operating at 30 rpm and at a temperature of 1,100°C, with various degrees of reduction applied. It was found that in the central part of the specimens an intensive plastic deformation developed, the axial contraction attained even 50%

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S/133/60/000/010/008/013
A054/A029

The Mechanism of Metal Destruction During Transverse Rolling

Just before destruction, which took place at a reduction of 6.4%. The axial contraction developing in the middle disk, which is actually free from axial pressures, proves that considerable transverse tensile stresses arise in the central zone, destroying the metal. For short billets it was found that the value of critical reduction increased, which can be explained by the phenomenon that the lateral tensile stesses developed in such samples are not so intensive as in billets of a more longitudinal shape, on account of the smaller degree of expansion in connection with the more intensive axial flow of the metal in the border zone. Axial stresses were found to have only average values without any particular influence on the mechanism of destruction. Analogous results were obtained with compact samples, in which the expansion of the metal was limited, because the sample was held in a closed holder during rolling. There are 6 figures and 5 references: 1 German and 4 Soviet.

ASSOCIATION: TsNIIChM

Card 2/2

S/182/63/000/003/003/008
A004/A127

AUTHORS: Teterin, P. K., Luk'yanov, V. P., Kareva, Ye. N.

TITLE: Improving the technology of producing rings from 1Kh21N5T (1Kh21N5T) steel

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no. 3, 1963, 13 - 16

TEXT: The authors report on tests carried out, together with S. T. Brun'ko and I. F. Terekhov, to study the technological ductility of 1Kh21N5T steel in the temperature range of 800 - 1,250°C. The nature of structural changes in the 1Kh21N5T steel was investigated at various heating temperatures and heat-treatment conditions. New optimum conditions of heating, deformation and heat treatment of seamless rolled rings of this steel grade were established as follows: the blank heating temperature prior to deformation should be 1,100°C; for large-size forgings weighing more than 150 kg the recommended temperature is 1,150°C. The temperature at the end of the forging or rolling process should not exceed 950°C. Heat treatment of the rings should consist in quenching in

Card 1/2

water at temperatures in the range of 950 - 1,000°C. This improved technology of manufacturing seamless rolled rings of 1Kh21N5T steel makes it possible to completely eliminate rejects because of low notch toughness values. There are 5 figures and 2 tables.

ACCESSION NR: AR4015665 S/0081/63/000/021/0343/0343

SOURCE: RZh. Khimiya, Abs. 21M122

AUTHOR: Teterin, P. K.; Vdovin, V. F.; Kozlov, G. B.

TITLE: Selection of glass fluxes for hot pressing of steels and alloys

CITED SOURCE: Steklo. inform. materialy* Gos. n.-i. in-ta stekla, no. 1 (118), 1963, 57-61

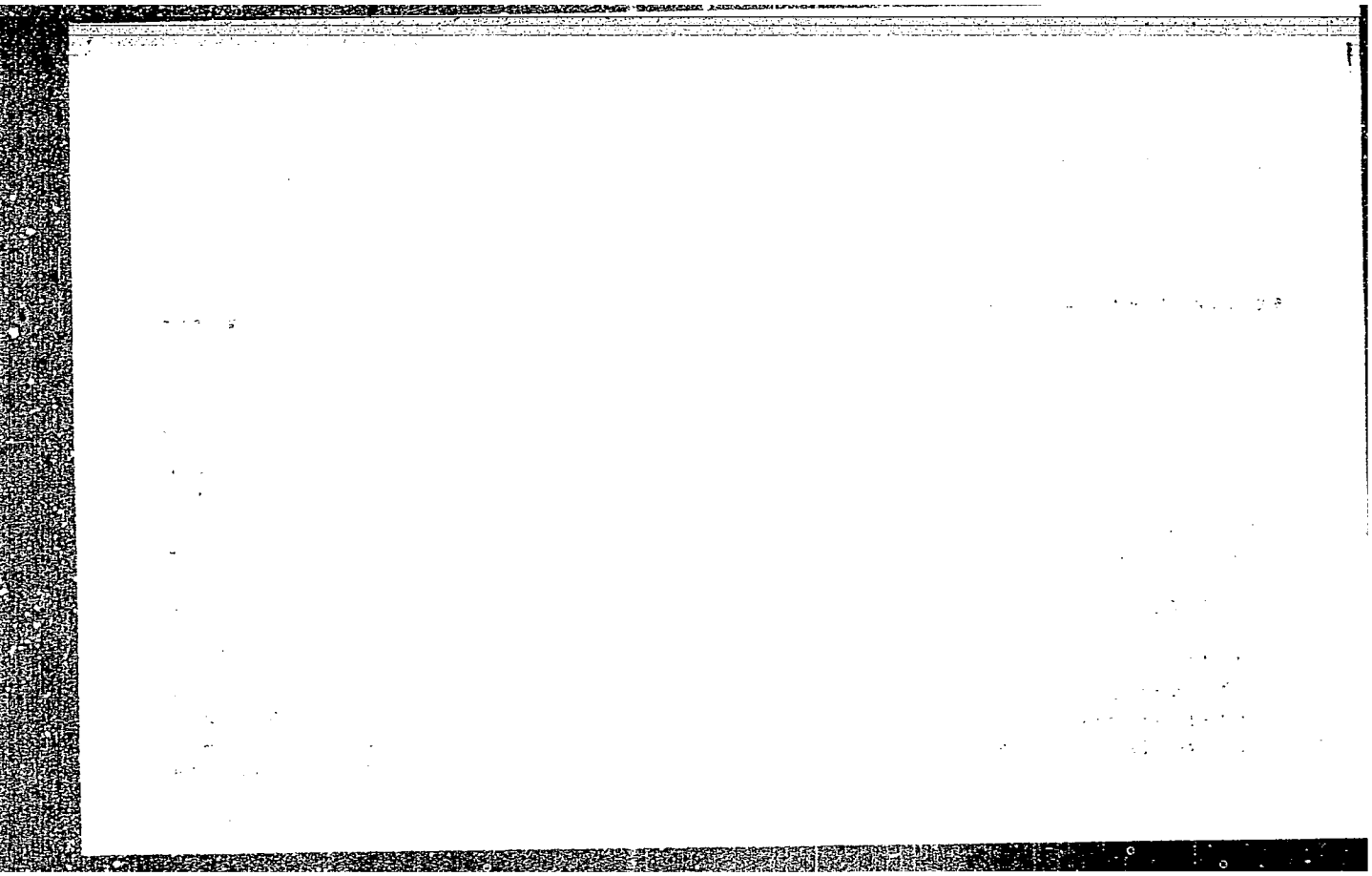
TOPIC TAGS: glass flux, hot pressing glass flux, steel pressing flux, alloy pressing flux, flux identification, high temperature flux property

ABSTRACT: Universal glass fluxes for pressing steels at any temperature are not available. The authors suggest that the best flux to use in pressing steels and alloys for millable blanks is a glass which exhibits the properties of 185V glass at 1150C at the temperature of pressing in a container. Glass flux exhibiting the properties of glass 269 at 1150C at discharge temperature can be used when pressing steel and alloys for glass collars. To insure proper use of glass fluxes in hot pressing, each manufactured lot of glass should be tagged with a rating plate in the form of a viscosity-temperature graph. Authors' summary.

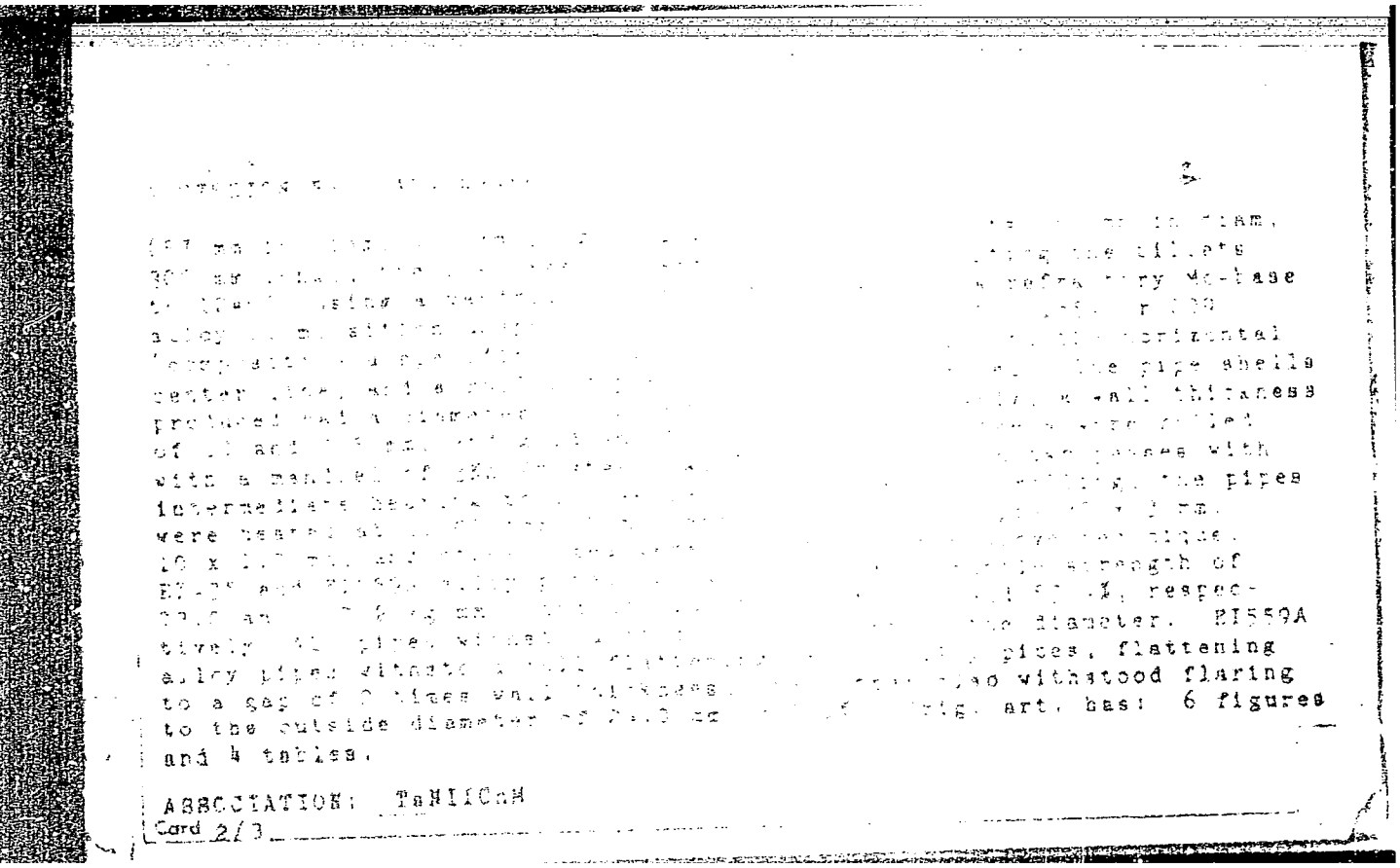
Card 1/1 DATE ACQ: 09Dec63 SUB CODE: ML, MA ENCL: 00

TETERIN, P.K.; LUK'YANOV, V.P.; KAREVA, Ye.N.; Prinimali uchastiye:
BRUN'KO, S.T.; TEREKHOV, I.F.

Improved procedure for the manufacture of 1Kh21N5T steel rings.
Kuz.-shtam.proizv. 5 no.3:13-16 Mr '63. (MIRA 16:4)
(Steel forgings) (Forging)



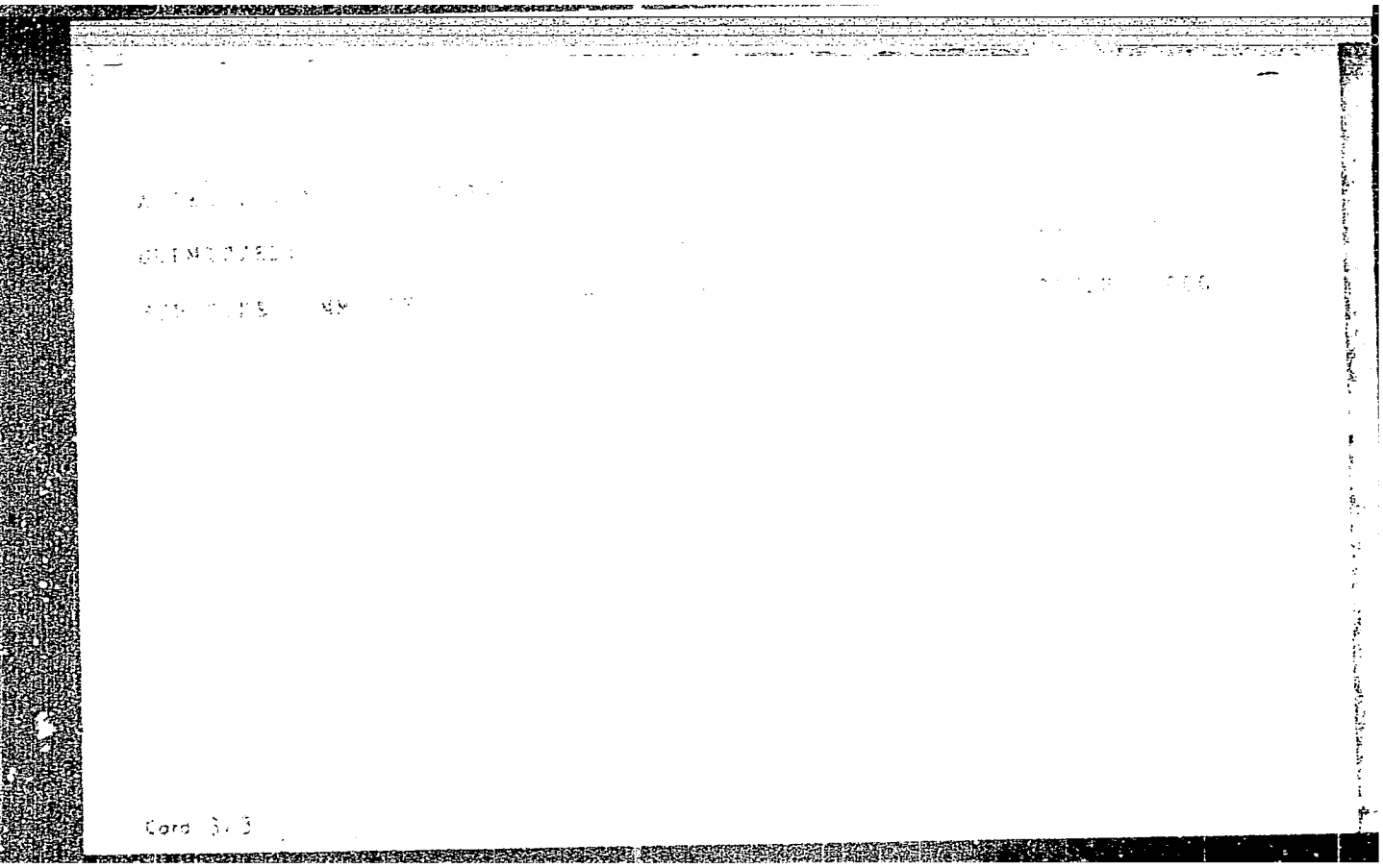
APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001755510012-4"



and 4 tables.

ASSOCIATION: TsNIICnM

Card 2/3



SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 6, 1965, 4-7

TOPIC TAGS: stainless steel, heat resistant steel, low ductility steel, steel

or with dry graphite or glass-cloth lubricant, using solid or hollow punches with

Card

L 54[illegible]-65
ACCESSION NR: AP5[illegible]

[illegible] completely eliminated [illegible], however, ineffective [illegible] piercing punch, and this method cannot be recommended [illegible] steels and alloys under industrial conditions. [illegible] was found to be the best method for blanks of carbide [illegible]. This method ensures a good quality surface of the pierced hole, requires the least power, and only slightly distorts the shape of the pierced [illegible]. In all cases, the use of a lubricant significantly decreased the power required for piercing. The use of glass cloth as a lubricant reduced the required power by 20—25%. Orig. art. has: 7 figures. [MS]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM, IE

NO REF SOV: 005 OTHER: 000 ATD PRESS: 4030

Card 2/2

ACCESSION NR: AT50[illegible] [illegible] /19/0200/0205

AUTHOR: Teterin, [illegible]

TITLE: Production of E[illegible] [illegible] and plates

SOURCE: Moscow. Tsentral'nyy [illegible] [illegible]vatel'skiy institut chernoy metallurgii. [illegible] [illegible]965. Spetsial'nyye stali i splavy [illegible]

TOPIC TAGS: nickel alloy, chrom[illegible] [illegible] alloy, molybdenum containing alloy, alloy bar, all[illegible] [illegible] plate, alloy mechanical property, bar rolling, shee[illegible] [illegible] rolling EP375 alloy

ABSTRACT: Experiments have been [illegible] [illegible] the technology of [illegible] hard [illegible] [illegible] are 12—75 mm in diameter and sheets and plates [illegible] [illegible] and 250—1200 mm wide. It was found that the all[illegible] [illegible] ductility at [illegible]—1200C. At higher temperat[illegible] [illegible] drops owing to the formation of low-melting eut[illegible] [illegible] boundaries. On the other hand, at 900—950C brittle [illegible] [illegible]mpounds are formed, which adversely affect the ducti[illegible] [illegible] the hot working

Card 1/

L 58401-65

ACCESSION NR: AT5013887

[illegible] mm in diameter [illegible] were rolled from [illegible] ingots (2100—2500 kg) [illegible] ingots were pres[illegible] rolled into plates [illegible] which were not [illegible] thick were cold [illegible] from hot rolled sheets [illegible] and [illegible] ducts after annealing at [illegible] kg/mm², [illegible] strength [illegible] of [illegible]—56%. The tensile strength, elongation, [illegible] strength of cold-[illegible] were [illegible] plates. All the [illegible] passed prescribed [illegible] to intergranular corrosion. The [illegible] plates, and [illegible] delivered to a customer. [illegible] has: [illegible] figures and [illegible] [NB]

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (Central Scientific Research Institute of Ferrous Metallurgy)

SUBMITTED: 00 ENCL: [illegible] SUB CODE: MM, IE

NO REF SOV: 002 OTHER: [illegible] ATD PRESS: 4042

Card 2/2 [illegible]

L 4938-66 EWT(m)/EPF(c)/EWA(d)/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) MJW/JD/HW/
ACC NR: AT5021677 WB/GS SOURCE CODE: UR/0000/65/000/000/0256/0262

AUTHORS: Tatarin, P. K. (Doctor of technical sciences); Al'shevskiy, L. Ye. (Candidate of technical sciences); Kurochkina, L. M. (Engineer)

ORG: none

TITLE: Hot forming of pipes from hard-to-form steels

SOURCE: Tekhnicheskiy progress v trubnom proizvodstve (Technical progress in pipe production). Moscow, Izd-vo Metallurgiya, 1965, 256-262

TOPIC TAGS: pipe manufacture, steel pipe, superheated steam pipe, pipe forming/ EP399 alloy steel, EP400 alloy steel, KhPT 32 cold rolling mill, 176a lubricant

ABSTRACT: Hot forming of pipes from high alloy steels EP399 and EP400 (developed by TsNIIChM for superheated steam use (t = 700C, p = 400 atm)) was investigated. After preliminary tensile and torsion tests it was decided to investigate the preheat temperature ranges of 1000-1100C (EP399) and 1050-1150C (EP400). Glass lubricants 176a, 185v, and 192 were chosen for EP399 and 176a and 185v for EP400 after preliminary tests. Blanks of 115-mm diameter (1.0-1.3 m long) were cut into 200-mm long sections, mechanically reduced to 106-mm diameter, and pressed into

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ACC NR: AT5021677

32-42-mm diameter pipes (6.5-8.0-mm wall thickness) on a 1500-ton press at a speed of 300 mm/sec, resulting in 90-94% (10-17 elongation) deformation for EP400 and 90-92% (10-12) for EP399. Satisfactory surface finish was obtained at 1100-1150C (EP399) and at 1030-1080C (EP400), requiring pressing forces of 450-920 tons (specific pressure 50-102 kg/mm^2) and 498-840 (55-93 kg/mm^2) respectively. It was found that in the temperature range 1030-1200C lubricant 176a was most effective. The pipes were chemically cleaned, heat treated (heated to 1100C in 35 minutes, air cooled), cold rolled on mill KhPT-32, and again heat treated (as above). The final mechanical properties were found to agree, in general, with the requirements (EP399: σ_b = 70-74, σ_s = 37-41, σ_s = 39-46, ψ = 54-60, a_k = 11.1-12; EP400: 57-62, 29-32, 28-36, 19-36, 3-6 respectively). The finished pipes were tested for corrosion, and some of the EP400 pipes failed. Some improvement of EP400 steel properties was found necessary to eliminate these difficulties. Orig. art. has: 7 figures and 4 tables.

SUB CODE: IE/ SUBM DATE: 14Apr65

OC

Card 2/2

L 00558-66 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(k)/EWP(b)/EWP(z)/EWA(c)
MJW/JD/HW

ACCESSION NR: AP5019945 UR/0133/65/000/008/0730/0734
621.774.35

AUTHORS: Teterin, P. K.; Luzin, Yu. F.; Kats, G. I.; Kaufman, M. M.; Kukarskikh, V. N.

TITLE: Manufacture of stainless steel pipes with low nickel content

SOURCE: Stal', no. 8, 1965, 730-734

TOPIC TAGS: stainless steel pipe, stainlesc steel, steel alloy / EP53 steel, EP54 steel, OKh21N6M2T steel, OKh21N5T steel

ABSTRACT: The plastic properties and structure of new low-nickel alloys OKh21N5T (EP53) and OKh21N6M2T (EP54), recommended as substitutes for steels 1Kh18N9T and 1Kh18N12M2T, were investigated at TsNIIChM; the technology of pipe rolling from these steels was developed and introduced at Novotrubnyy zavod. By hot twisting it was found that plasticity of the steels increased steadily with working temperature (1000-1250C) and rose sharply above 1200C. Thirty specimens were pierced at different temperatures (3 of each steel at 1050, 1100, 1150, 1200, 1250C), and impact strength and microstructure were investigated. It was found that the impact strength at room temperature decreased as piercing temperature increased,

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L 00558-66

ACCESSION NR: AP5019945

dropping sharply above 1200C (from 20 and 14 kgm/cm^2 at 1200C to 14 and 7 kgm/cm^2 at 1250C for EP53 and EP54 respectively) and that the grain size increased above 1200C. Thus for satisfactory mechanical and surface properties the working temperature should be kept at ≈1150C. Comparison of pressure on the rollers and power requirements between these steels and expensive alloys 1Kh18N9T and 1Kh18N12M2T showed these to be 30-40% lower (on the average) for the new alloys. After hot-rolling into 41 x 4.5-mm pipes (at 7° feed, roller speed 2.0 m/sec, wall thickness reduction 32%, drawing coefficient 1.8-1.85, final temperature 950-1000C) the alloy properties were found to be σ_B = 70.1, 63.0 kg/mm^2; σ_5 = 29.3, 29.5%; a_k = 19.8, 16.1 kgm/cm^2 for EP53 and EP54 respectively after quenching from 1050C in water. Based on these results, technical parameters were defined for making pipes (ChMTU/UkrNITI No 313-61) and pipe blanks (ChMTU/TsNIIChM No 569-61). After rolling 108 x 5.5 mm and 89 x 4.5 mm pipes under industrial conditions it was found that the best heat treatment consisted of 8-10 minutes at 970C and quenching in water (for both steels). Orig. art. has: 4 figures and 6 tables.

ASSOCIATION: TsNIIChM (TsNIIChM); Novotrubnyy zavod (New Pipe Plant)

SUBMITTED: 00 ENCL: 00 SUB CODE: MM, IE

NO REF SOV: 000 OTHER: 000

Card 2/2

KOLPIKOV, D.I.; TETERIN, P.P.

Techniques used in study the rate of water metabolism (total expenditure of water by soils and plants) under field and laboratory conditions. Fiziol. rast. 8 no.1:134-137 '61. (MIRA 14:3)

1. Stavropol State Pedagogical Institute and Stavropol Agricultural Institute.
(Botanical apparatus) (Plants--Water requirements)

TETERIN, P.P.

USSR/Human and Animal Physiology - Body Temperature Regulation. T-3

Abs Jour : Ref Zhur - Biol., No 10, 1958, 54832

Author : Teterin, P.P.

Inst : Stavropol' Institute of Agriculture.

Title : Thermoelectric Methods for Measuring Body Temperature.

Orig Pub : Tr. Stavropol'sk. s.-kh. in-ta, 1956, vyp. 7, 537-548.

Abstract : A new variation in constructing a copper-contstantan thermoelement is described here. Measurement accuracy amounted to 0.02° /C/. The duration of measuring time is about 2 minutes. -- S.A. Nadirashvili.

Card 1/1

TETERIN, P.P.

KOLPIKOV, D.I.; TETERIN, P.P.

Studying the intensity absorption and transpiration of water under field conditions by the use of scales and a hygrometer. Fiziol. rast. 5 no.2:205-208 Mr-Ap '58. (MIRA 11:4)

1.Stavropol'skiy sel'skokhozyaystvennyy institut, Stavropol'.
(Botany--Field work) (Plants--Water requirements)

TETERIN, P.P., dotsent.

All-purpose moisture meter. Gidr. i mel. 8 no.9:56-57 S '56. (MLRA 9:10)

(Soil moisture)

CA TETERIN, V.A.

28

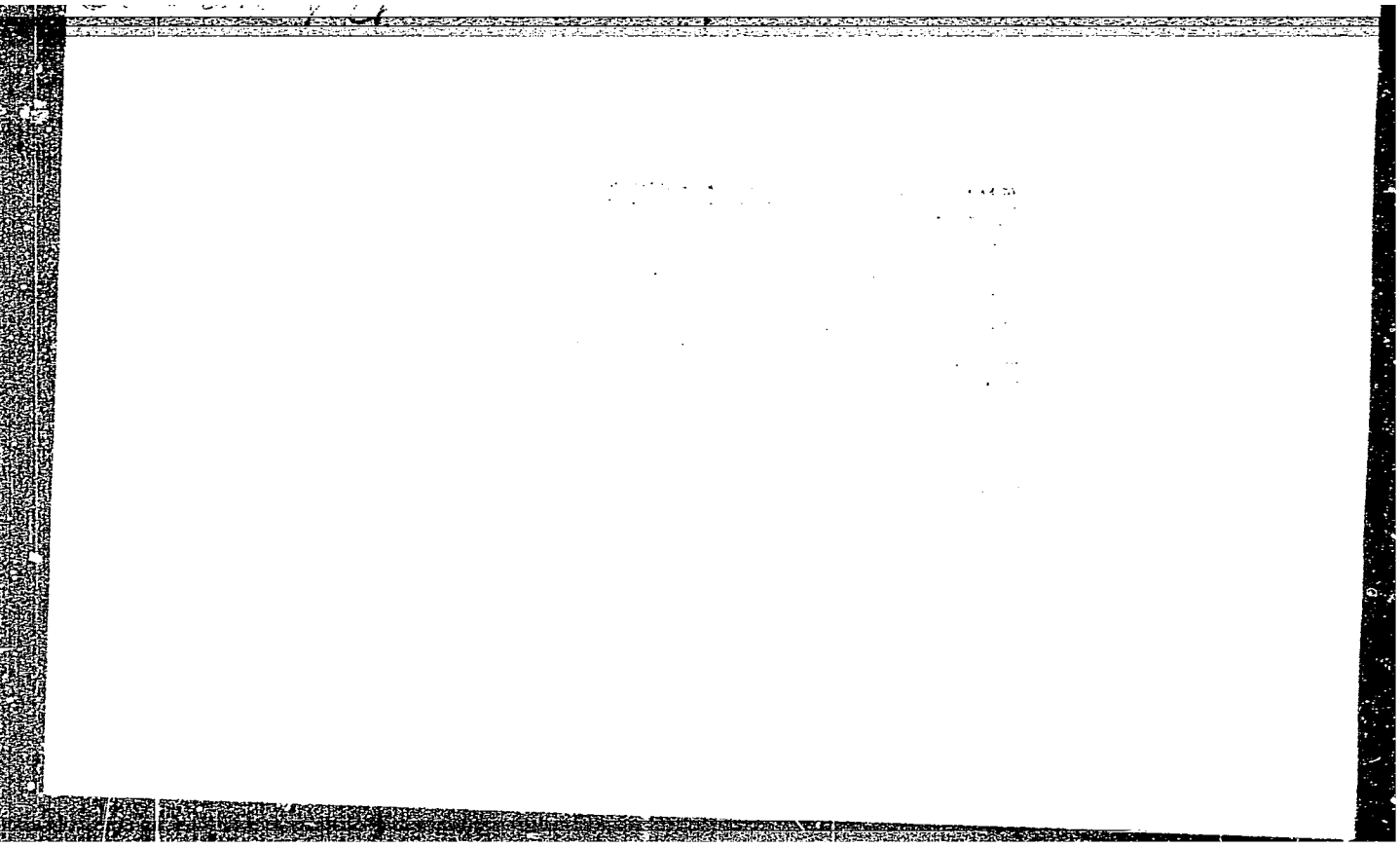
Continuous predefecation with installation of "adsorbent" by a system of Yu. F. Bogatskii. V. A. Teterin, V. V. Revenko, and M. S. Sheptun. *Sakharnaya Prom.* 25, No. 7, 7-10(1951).—An adsorbent is an app. in which a preheated diffusion juice is continuously mixed with unsatd. juice from the first carbonation before this predefecated juice enters a defecation station. A considerable improvement in the quality of the juice and sugar was obtained and lesser filtering area is required. A sketch and description of the app. are given.

V. K. Baikow

TETERIN, V.A., dots.

Preface. Trudy LVMI no.6:3-5 '57. (MIRA 11:5)

1. Ispolnyayushchiy obyazannosti direktora Leningradskogo Voyenno-mekhanicheskogo instituta.
(Leningrad--Military engineering--Study and teaching)



TETERIN, V.A.; REVENKO, V.V.; RYCHKAL', A.G.

"B.V.IA." rotary sulphur furnace. Sakh.prom. 27 no.7:39-41 Jl '53.
(MLRA 6:6)

1. Sumskoy sakhsveklotrest.
(Sugar industry)

AUTHOR: Litvak, I.M., Professor 3-8-15/34

TITLE: Control Methods in Sugar Production (Metody kontrolya v sakharnom proizvodstve)

PERIODICAL: Vestnik Vysshey Shkoly, 1957, # 8, p 68 (USSR)

ABSTRACT: The article contains an account of an inter-vuz scientific conference on the above subject which took place at the Kiyev Technological Institute of Food Industry (Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti). A total of 20 reports was delivered by instructors of the Kiyev, Moscow and Leningrad technological institutes of food industry, the Frunze Polytechnic Institute (Frunzenskiy politekhnicheskiy institut), by collaborators of the All-Union Scientific Institute of the Confectionery Industry (VNIKP), the Central Scientific Research Institute of the Sugar Industry (TsINS), the Kiyev branch of the Scientific-Research Institute of Alcohol Industry (Nauchno issledovatel'skiy institut spirtovoy promyshlennosti), the Ukrglavsakhar and the Kiyev Factory of Control-Measuring Devices (Kiyevskiy zavod kontrol'no-izmeritel'nykh priborov). The total number of participants was 130.

Among those delivering reports were: V.A.Teterin, chief

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chemist-technologist of Ukrglavsakhar, G.S.Benin, Director of the Laboratory for Chemical Control of TsINS, Professor P.M.Silin of the Moscow Technological Institute of Food Industry (MTIPP), the Professors M.Z.Khelemskiy (TsINS), I.M. Litvak (KTIPP). A refractometric method for ascertaining the saturation coefficient suggested by Professor I.Ya.Sadov (LTIPP) was approved by the conference.

ASSOCIATION: Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti imeni A. I. Mikoyana (Kiyev Technological Institute of Food Industry imeni A. I. Mikoyan)

AVAILABLE: Library of Congress

Card 2/2

ЛЕТЕРИН, У.А.

3(3) P.5 PHASE I BOOK EXPLOITATION SOV/3223

Akademiya nauk SSSR. Kompleksnaya antarkticheskaya ekspeditsiya

Klimat Antarktiki (Climate of the Antarctic) Moscow, Geografgiz, 1959. 285 p. (Series: Its: Trudy; Meteorologiya i klimatologiya) Errata slip inserted. 4,000 copies printed.

Ed.: S. N. Kumkes; Tech. Ed.: S. M. Kosheleva; Editorial Board: V. F. Burkhanov, B. L. Dzerdzeyevskiy, Kh. P. Pogosyan, and G. M. Tauber.

PURPOSE: This book is intended for meteorologists and climatologists. It will be of interest to all earth scientists concerned with the Antarctic region.

COVERAGE: This book contains 18 articles on the weather and climate of Antarctica. Articles represent the generalized results of processing data obtained by the Soviets during their expeditions to the Antarctic, 1955-1958. Individual authors have attempted to clarify and unify previously divergent views on Antarctic

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Climate of the Antarctic (Cont.) SOV/3223

meteorological processes (zonal circulation, temperature distributions, cyclonic and anticyclonic movement, etc.). No personalities are mentioned. References accompany individual articles.

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AVAILABLE: Library of Congress

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TETERIN, V. K.

"Condensation of Tetraphenylbutindiol with Phenol." Zalkind, I. S. Teterin, V. K. and Kusnetzoff, S. G. (p. 488)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1945, Volume 15, no. 6.

TETERIN, V.P., inzhener.

Apparatus for measuring the level of a liquid. Energetik 2 no.1:15-17 Ja '54. (MLRA 7:1)
(Measuring instruments)

TETERIN, V.P.

Effectiveness of phosphorus-potassium fertilizers for sugar cane on irrigated Sierozems of southern Central Asia. Dokl. AN Tadzh.SSR 2 no.2:45-49 '59. (MIRA 13:4)

1. Institut pochvovedeniya AN Tadzhikskoy SSR. Predstavleno akademikom Akademii nauk Tadzhikskoy SSR M.V.Krasichkovym.
(Sugar cane--Fertilizers and manures)

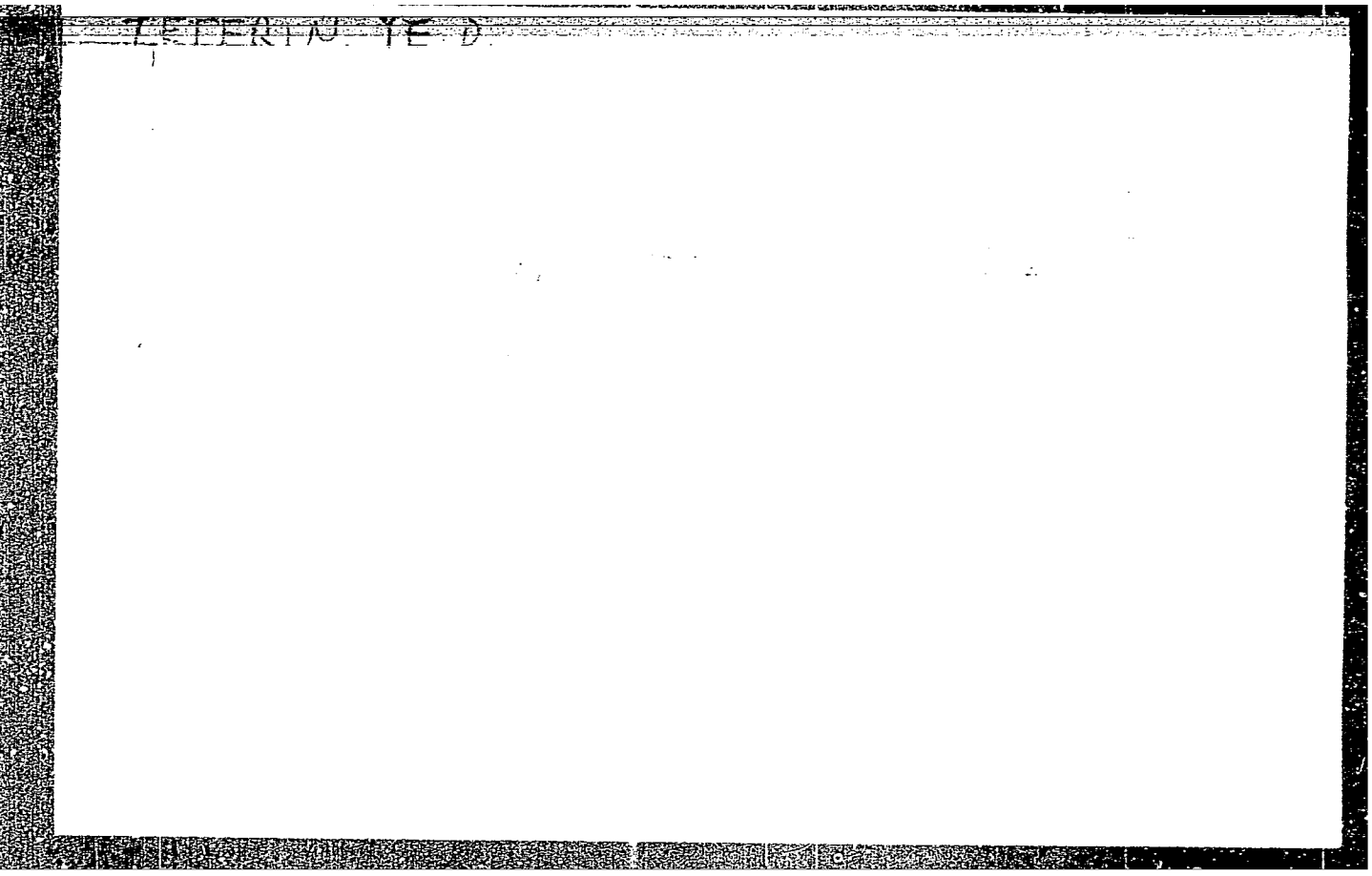
TETERIN, V.P.

Applying the Magnitskii method in determining adequate nitrogen supply for sugar cane [with summary in English]. Pochvovedenie no.113-114 Ap '59. (MIRA 12:7)

1.Tadzhikskiy nauchno-issledovatel'skiy institut sadovodstva, vinogradarstva i subtropicheskikh kul'tur.
(Sugar cane--Fertilizers and manures)
(Nitrogen)

DENISOV, A.Ye.; KOLALIS, R.P.; NEMILOV, Yu.A.; SADKOVSKIY, V.S.; TETERIN, Ye.D.; GRIDNEV, K.A.

Mechanism underlying the reaction Si^{29} (d, α) Al^{27}. IAd. fiz. 2 no.4:663-665 O '65. (MIRA 18:11)



TETERIN, Ye. K.

Category: USSR / Physical Chemistry - Surface phenomena. Adsorption. Chromatography. Ion exchange. B-13

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30215

Author : Preobrazhenskiy B. K., Lilova C. M., Dobronravova A. N., Teterin Ye. D.

Inst : not given

Title : Ion-Exchange Separation of Active Rare-Earth Elements Without the Use of a pH-Meter

Orig Pub: Zh. neorgan. khimii, 1956, 1, No 10, 2294-2299

Abstract: Description of a method of chromatographic separation of tracer amounts of rare earths (RE) in columns containing a cathionite of the Doweks-50 type, with elution with NH_4-lactate solutions. A procedure is recommended for the preparation of the elution solution by neutralization (to bromecresol purple with a transition interval pH 5-6) with gaseous NH_3. It was found that a solution prepared in this manner provides the best conditions for separation of RE, and on addition of phenol (to a concentration of 0.01 M) undergoes no change on prolonged storage. For isolation of Lu - Yb fraction use is made

Card : 1/2 -21-

NEMILOV, Yu.A.; OVCHINNIKOV, V.M.; PISAREVSKIY, A.N.; TETERIN, Ye.D.

Use of the FEU-12 in scintillation spectroscopy. Atom.energ. no.4:51-56 '56. (MLRA 9:12)
(Scintillation spectroscopy) (Photoelectric multiples)

TETERIN, Ye D

USSR/Nuclear Physics C-2

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 11024

Author : Nemilov, Yu.A., Ovchinnikov, V.M., Pisarevskiy, A.N., Teterin, Ye.D.

Inst : No t given

Title : Use of the FEU-12 in Scintillation Spectroscopy.

Orig Pub : Atom. energiya, 1956, No 4, 51-56

Abstract : Report of the results of a test of a new photomultiplier, FEU-12, which has a system of 12 dynodes of the shutter (venetian blind) type and has considerably better parameters than the FEU-19. The FEU-12 has a Sb-Cs or Bi-Ag-Cs cathode 15 mm in diameter. The bismuth-silver-cesium cathode is sensitive over a widere range of the spectrum, extending to 7500 A. Of the 12 tested specimens, 20 had an integral cathode sensitivity (ε) above 45

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USSR/Nuclear Physics

C-2

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 11024

microamperes per lumen (the light source of type A with a color temperature of 2848°); individual specimens have 80 microamperes per lumen. The coefficient of amplification at a normal working voltage on the order of 1600 volts amounts to 10^5 -- 4×10^6. The static light characteristic of the FEU-12 is linear to output currents above 50 ma, and prolonged operation at this current is possible. The linearity of the amplitude curve, upon exposure to gamma rays, extends to 4.5 Mev (in combination with a NaI(Tl) crystal). The value of the signal picked off reaches 40 -- 50 volts. The FEU-12 does not require a special choice of power supply: for all tested specimens, the best resolution was obtained when the voltages evenly divided between all the electrodes, including the gap between the cathode-- and the first dynode, where the voltage difference should be 2 -- 3 times greater. For all photoelectron multipliers with

Card 2/3

USSR/Nuclear Physics

Abs Jour : Ref Zhur - Fizika, No 5, 1957, 11024

C-2

45 microamperes per lumen, the width of the photo line Cs^{137} does not exceed 13%. The pulse build-up time determined by the FEU was 1.5 -- 2 x 10^{-8} seconds. The FEU-12 has a low noise level (less than 15 kev in the scale of the NaI (Tl) crystal) and good stability (the shifts of the Cs^{137} photo line from the initial position does not exceed 1 -- 1.5% within 12 hours).

Card 3/3

TETERIN, YE. D.

48-7-21/21

AUTHORS: Vil'dgrube, G.S., Zharkov, A.P., Teterin, Ye.D.

TITLE: Amplitude and Time Characteristics of a New Photoamplifier (Amplitudnyye i vremennyye kharakteristiki novogo fotoumnozhitelya)

PERIODICAL: Izvestiya Akad. Nauk SSSR, Ser. Fiz., 1957, Vol. 21, Nr 7, pp. 1034 - 1035 (USSR)

ABSTRACT: It was hitherto assumed that no short times of increase of the current impulses may be obtained on a shutter-type photoamplifier. When the time spreading of the flight of electrons in the amplification system of a photoamplifier is checked, the following can be found. The spreading time of the flight of electrons noticed at the exit mainly consists of two components: 1.) the dispersion on the section photocathode first "dinode" and 2.) the dispersion on the other amplifier system. The first component is the most important and irreversible one, for it determines the dispersion of the initial moments of the corresponding impulses and cannot be corrected by any scheme solutions. The second component is in this sense reversible that in the case of sufficient

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amplification of the amplifier only the initial part of the impulse increase can be utilized for measurements. It was observed in the photoamplifiers ФЭУ - 11 (ФЭУ - 12) that the increase time of the initial current impulse decreases with a stress increase (up to 300 V on one stage). Quite a number of modifications were carried out in the construction of the new photoamplifier. The total view of this amplifier may be seen on the figure. The modifications in the construction of the new photoamplifier are further described and explained in detail, as well as its time and amplitude characteristics. There are 1 figure (photograph of the individual types of tubes) and 1 Slavic reference.

ASSOCIATION: Radium Institute im. V.G. Khlopin, AN USSR (Radiyevyy institut im. V.G. Khlopina Akademiia nauk SSSR)

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PISAREVSKIY, A. N.

AUTHORS: Pisarevskiy, A. N., Teterin, Ye. D. 48-1-5/20

TITLE: On the Use of Domestic Phosphors for Scintillation-Counting (O primenenii otechestvennykh fosforov dlya stsintillyatsionnogo scheta).

PERIODICAL: Izvestiya AN SSSR Seriya Fizicheskaya, 1958, Vol. 22, Nr 1, pp. 23-23 (USSR).

ABSTRACT: It is the short abstract of a lecture. NaJ-Tl-crystals of home origin (Institute for Crystallography, VIMS, Khar'kov Factory for Chemical Reagents / Khar'kovskiy zavod khimreaktivov /) were investigated. They show satisfactory spectrometric properties and for the γ-line of Cs^{137} (600 keV) a dissolving power of not below 12% and for better crystals of 8%. In the case of CsJ-Tl a resolving power of 10-11% was obtained. The time of fluorescence in CsJ-Tl amounted to 1,2-1,5 μsec. During continuous storage and under the influence of radioactive radiation the crystals turn red. In this connection the time of fluorescence increases to ~ 2,5 μsec. The authors performed preliminary investigations for the purpose of finding effective crystals for the recording of neutrons (slow as well as rapid ones). In the Laboratory N. I. Bispen LiF-crystals with various activators (Tl, Ti, Sn, Eu, Mn and others) were grown. Of a number of tested activators it was only possible to

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introduce Ti and Sn to any considerable amounts. On introduction of titanium the scintillation amounted to ~1/30 of that of the NaJ-Tl-crystal (on radiation with γ-rays of the same energy). On introduction of Sn the scintillation was 2-2,5-fold higher than in the preceding case. In both cases the time of fluorescence amounted to less than 2 μsec. The activator-quantity in both cases was apparently not the optimum one. The tests are being continued. - I. V. Stepanov placed the BaF_2-crystals (without activator) grown by him at the authors' disposal. They are interesting for the recording of rapid neutrons. According to preliminary measurements the quantity of scintillation in BaF_2 amounts to 12 - 15% of that of NaJ-Tl. This is very promising and the investigations in this direction are continued. CaF_2-Eu, CaF_2-Ce and CaF_2-Gd-crystals were tested. The former two yielded a scintillation of ~8-10% of that of NaJ-Tl, whereas the third one showed a considerably smaller scintillation. The time of luminescence in BaF_2 as well as in activated fluorite amounted to less than a microsecond. It is assumed that further careful investigations of the phosphors investigated will give the possibility of obtaining effective neutron-detectors.

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Card 2/2 1. Chemistry 2. Crystal phospors-Application

PHASE I BOOK EXPLOITATION SOV/3503

Akademiya nauk SSSR. Radiyevyy institut

Trudy, t. IX (Transactions of the Radium Institute, Academy of Sciences USSR, Vol. 9) Moscow, Izd-vo AN SSSR, 1959. 287 p. Errata slip inserted. 1,700 copies printed.

Ed.: N.A. Perfilov, Doctor of Physical and Mathematical Sciences; Ed. of Publishing House: G.M. Aron; Tech. Ed.: A.V. Smirnova.

PURPOSE: The volume is intended for physicists.

COVERAGE: The book represents volume 9 of the Transactions of the Radium Institute and contains the results of studies conducted at the Institute chiefly from 1955 to 1956. There are a number of articles dealing with the study of nuclear reactions occurring with particles of different energies ranging from several eV up to hundreds of MeV. Others treat different problems of the physics of neutrons. Results of studies of various neutron sources, neutron energy distribution in a moderator (water), and other problems connected with the theory of neutron interaction with matter are presented. The majority of the articles are concerned with problems of method. The authors provide a complete description of the construction of equipment and of the results of tests performed under laboratory conditions. No personalities are mentioned. References accompany individual articles.

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Translation from: Referativnyy zhurnal, Fizika, 1960, No. 6, p. 271, # 14772

AUTHORS: Pisarevskiy, A.N., Teterin, Ye.D.

TITLE: On the Amplification Factor of Photomultipliers[25]

PERIODICAL: Tr. Radiev. in-ta. AN SSSR, 1959, Vol. 9, pp. 152-154

TEXT: The comparison of the amplification factors of photomultipliers of the 1β (1V) type (group of 8 pieces), which were measured under statical (σ_{st}) and pulse (σ_p) conditions, showed considerable differences of systematical character (on the average for the group $\sigma_{st} : \sigma_p \approx 1.7$). The authors, basing on analogous experiments with the amplifiers of the ФЭУ -12- (FEU-12-)[25] type (the dynodes of which are produced from Cu - Al - Mg - alloy), which did not show marked differences, conclude that the cause of differences in case of the amplifiers of the 1V type (Al - Mg - alloy) consists in the material of their dynodes.

Translator's note: This is the full translation of the original Russian abstract.

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21(3) SOV/48-23-2-19/20

AUTHORS: Nemilov, Yu. A., Lomonosov, I. I., Pisarevskiy, A. N., Soshin, L. D., Teterin, Ye. D.

TITLE: Some Problems on the Linearity of the Scintillation Spectrometer (Nekotoryye voprosy lineynosti pri stsintillyatsionnoy spektrometrii)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 2, pp 257-262 (USSR)

ABSTRACT: In a more accurate investigation of the scintillation reaction of NaJ(Tl) in the case of γ excitation the authors found deviations from the reaction linearity up to 20% within the range of $E_\gamma < 100$-150 kev (Ref 6). This problem was investigated according to a method already applied in previous papers. The measurements were carried out by means of crystals produced at the Institut kristallografii AN SSSR (Crystallographical Institute of the AS USSR) and in the Khar'kov Works. The crystals were bred according to methods devised by Kiropulos and Stokbarger. The measurement results of various crystals NaJ(Tl), CsJ(Tl), KJ(Tl) on deviation of the scintillation reaction from linearity within the range 10-1500 kev are

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listed in a table. Perceptible deviations were found within the range 50-100 kev. It represented a minimum which attained different values in the individual crystals (Fig 1); the least value was found with KJ(Tl). Besides, the dependence of resolving power on the energy of the measured radiation and the effectiveness of conversion of the crystals were investigated. In the case of ideal crystals there is a linear dependence of the square half width of spectrometer lines Δ_c^2 on E_γ^{-1}. In the case of small E_γ values this dependence is expressed by $\Delta_c = \sqrt{\Delta_K^2 + \Delta_\phi^2}$, where Δ_K denotes crystal resolution and Δ_ϕ that of FEU. In the case of high energies the effectiveness of conversion $\varkappa$ is to be determined according to formula (6) (Ref 14). For a number of E_γ values the corresponding $\varkappa$ values are given in %. A duplication of lines of the total energy by NaJ(Tl) crystals was found, the presence of which possibly may be attributed to crystal water. There are 4 figures, 1 table, and 15 references, 4 of which are Soviet.

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Radium Inst im V.G. Khlopin, AS USSR

21(3) SOV/48-23-2-20/20

AUTHORS: Pisarevskiy, A. N., Teterin, Ye. D.

TITLE: On the Photomultiplier Amplification in Time Measurements (Ob usilenii fotoumnozhiteley pri vremennykh izmereniyakh)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 2, pp 263-264 (USSR)

ABSTRACT: In a previous paper (Ref 1) the authors have shown that the amplification of various FEU types decreases during the transition from steady excitations to pulses of μsec. The strongest decrease was found in the case of an FEU with good time resolution. In the present paper FEU-1v, FEU-33, FEU-13m and FEU-6810 were investigated by the methods applied in reference 1. The period of growth of FEU pulses (the mean time parameters of FEU investigated are given in table 1) was measured by the method of self-coincidence by means of a plastic scintillator with $\tau \approx 3.10^{-9}$ sec. The authors found a difference between the values of the coefficients of steady amplification and the pulse amplification in the case of the initial RC of the chain. This difference depends on RC and is expressed by the formula $K = (1+n)L$, where n denotes the dependence on RC. It

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